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**I. INTRODUCTION**

**A. Real Party in Interest**

The real party in interest with respect to this Appeal is Ericsson, Inc., the named Assignee in this application.

**B. Related Appeals and Interferences**

There are no interferences or other appeals known to the Appellant, the Appellant's legal representative, or the Assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending Appeal.

**C. Status of Claims**

This application was originally filed with thirteen claims -- Independent Claims 1 and 10, and dependent Claims 2-9 and 11-13.

Responsive to the first Official Action of this application, an Amendment was filed setting forth amendments to Independent Claims 1 and 10.

A second Official Action was issued on July 28, 1999, setting forth a rejection of Claims 1-13. A Request for Reconsideration was filed in response thereto. A final Official Action was issued on January 3, 2000, setting forth a final rejection of Claims 1-13. Hence, Claims 1-13 are currently pending in this application.

Pursuant to 37 C.F.R. § 1.191(a), Applicant hereby Appeal the Examiner's decision finally rejecting Claims 1-13 to the Board of Patent Appeals and Interferences.

**D.      Status of Amendment**

No amendments were submitted after issuance of the final Official Action dated January 3, 2000.

A copy of the claims at issue on Appeal is attached as Appendix A.

**E.      Reinstatement of the Appeal**

Applicant requests reinstatement of the appeal, and supplies this supplemental appeal brief to refute the new grounds of rejection.

**II.     SUMMARY OF THE INVENTION<sup>1</sup>**

Cellular telephones on today's market are designed to be smaller so that they are easier to hold and carry. One of the results of the smaller size, however, is that the microphone is further away from the user's mouth, which makes it more difficult for the microphone to pick up the user's voice.

The flip, which is the pivotal portion that covers the keypad and flips open when the telephone is in use, has been used to help overcome this problem. One approach has been to place a microphone at the free end of the flip. This requires that wires be run to the microphone, which adds cost and manufacturing steps. Another approach has been to build an acoustic wave guide into the flip. The wave guide is a triangular shaped cavity formed between panels in the flip that funnel sound to the hinge. An opening in the hinge

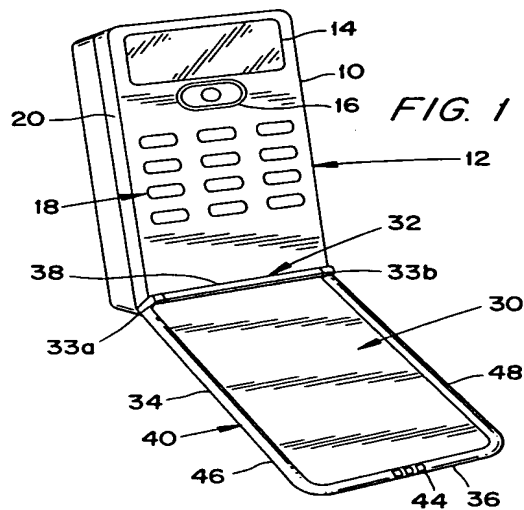
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<sup>1</sup>This summary is provided in accordance with 37 C.F.R. § 1.192(5) and Section 1206 of the Manual of Patent Examining Procedure, and is not intended to limit the subject matter of the claimed invention to the specific embodiment described herein.

directs the sound to the microphone. This approach requires that the flip be thicker to accommodate the wave guide, which increases the thickness of the telephone itself, and diminishes its aesthetic appeal.

The present invention solves this problem by providing an acoustic pipe which extends entirely along a peripheral edge of the flip from the free end to the hinged end to carry sound from the free end to the hinged end of the flip. The location of the acoustic pipe on the peripheral edges of the flip advantageously positions the additional thickness due to the pipe on the periphery of the flip, so that the portion of the flip that covers the keypad remains thin, and the profile of the unit as a whole is aesthetically pleasing. Because the pipe is located along the peripheral edge of the flip, the main housing in the telephone may be recessed along its peripheral edge in order to accommodate the acoustic pipe when the flip is in the closed position, to thereby maintain the thin profile of the telephone.

In accordance with the present invention, as illustrated in Figure 1 of the application and described at page 3, lines 8-24, the flip style cellular telephone of the present invention includes a main housing 10 and a flip 30. The housing 10 includes a front panel 12 having a display screen 14, earpiece 16 and keypad 18. The housing 10 also contains the electronic circuitry of the telephone.



The flip 30 is connected for pivoting movement to the main housing 10 by hinge 32. The flip 30 includes an acoustic pipe 40 formed on a peripheral edge 34 of the flip. The acoustic pipe 40 is a hollow conduit that leads from the free end 36 of the flip to the hinged end 38 in main housing 10 of the telephone. A sound opening 44, including a plurality of small holes, is provided in the acoustic pipe 40 at the free end 36. Sound made by the user enters the acoustic pipe 40 to carry from the opening 44 to the hinged end 38.

### III. THE REJECTION, REFERENCES AND EXAMINER'S POSITION

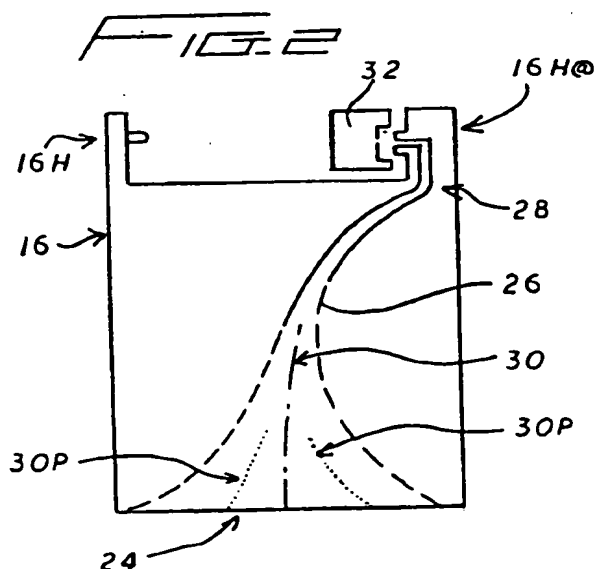
#### A. The Rejection

The Examiner initially rejected Claims 1-13 under 35 U.S.C. § 103(a) based solely on the disclosure contained in U.S. Patent No. 5,832,079 to *Rabe*. After filing an Appeal Brief, the Examiner now makes the rejection of Claims 1-10 under 35 U.S.C. § 103(a) as being unpatentable over *Rabe*, in view of U.S. Patent No. 5,915,015 to *Thorton*.

#### B. The References

##### 1. *Rabe* '079

U.S. Patent No. 5,832,079 to *Rabe* is directed to an acoustic horn for use in cellular flip phones. Referring to accompanying Figure 2 from *Rabe*, and as described in column 3, lines 14-47, a flip cover 16 is pivotally mounted at its upper



end to a cellular phone casing (not shown), and includes an acoustic horn "specially configured" for being formed in the flip cover 16. As described in column 3, lines 16-19, "[t]he sound collecting and channeling acoustic horn itself is formed as a flared cavity 26 within the cover 16, having a mouth or aperture end 24, and a throat end 28." The specification further notes that other acoustic horn types are contemplated for use in implementing the present invention, and may include horns of the conical type, parabolic type, hyperbolic type, plus other shapes and types. See Column 3, lines 45-47.

2. *Thorton '015*

U.S. Patent No. 5,915,015 to *Thorton*

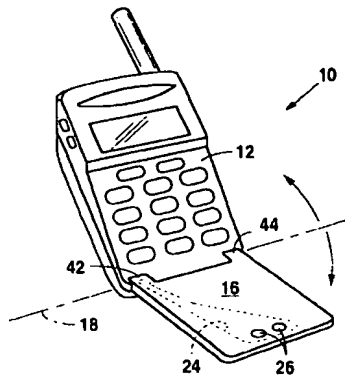


Fig. 1

discloses a telephone having a sealed acoustic passageway through a flip cover hinge. Referring to accompanying Figure 1 from *Thorton*, a flip type telephone 10 is illustrated. An acoustic passageway extends from the hinged end of the cover 16 to the apertures 26 disposed at the distal end of the cover

16. As illustrated in the drawing, the acoustic channel is triangular in shape, and does not extend along the periphery of the flip.

C. The Examiner's Position

The Examiner's position with respect to the rejection of Claims 1-10 under 35 U.S.C. § 103(a) is that *Rabe* in combination with *Thorton* renders obvious the limitations of independent Claims 1 and 10. While the Examiner recognizes that *Rabe* does not disclose that the acoustic channel extends entirely along one of the peripheral edges of the flip, the Examiner asserts that *Rabe* does disclose that the cavity can be made in "other shapes and types", including but not limited to conic section-shaped cavities. The Examiner then refers to *Thorton* for disclosing the utility of providing a triangular shaped acoustic pipe in a flip member of a portable phone, which is adjacent to the periphery of the flip. The Examiner asserts that "[w]hile the cavity of Thorton does not extend completely along the edge of the flip, absent any critical teaching other than an aesthetic appearance as to the purpose of disposing an acoustic pipe on the periphery of the flip, as taught in applicant's specification... there is no functional distinction between a cavity such as taught by Thorton and one in which the outer edge of the cavity is disposed along a peripheral edge of a flip." The Examiner then concludes that it would be obvious to one skilled in the art to incorporate such a cavity shape, as taught by *Thorton*, into *Rabe*, and to further modify the acoustic pipe such that the cavity is disposed entirely along the peripheral edge of the flip.



**IV. ISSUE**

The sole issue on Appeal is whether Claims 1-10 are properly rejected under 35 U.S.C. § 103(a) based on the disclosure contained in U.S. Patent No. 5,832,079 to *Rabe*, in view of the disclosure contained in U.S. Patent No. 5,915,015 to *Rabe*.<sup>2</sup>

**V. GROUPING OF THE CLAIMS**

Claims 1-10 have been grouped together for purposes of the rejection based on 35 U.S.C. § 103(a). It is believed that Claims 1-10 stand or fall together.

**VI. ARGUMENT**

**A. The Rejection of Claims 1-10 Based on the Disclosure Contained in *Rabe* and *Thorton* is Improper**

The Claim 1 defines a flip style cellular telephone, comprising a main housing, a flip pivotally mounted to the main housing by hinge, which has a free end remote from the hinge, and includes an acoustic pipe entirely extending on a peripheral edge of the flip from the free end to the hinged end to carry sound from the free end to the hinged end of the flip. Likewise, independent Claim 10 defines an acoustic pipe entirely extending on a peripheral edge of the flip from the free end to the hinged end.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references

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<sup>2</sup> The Examiner failed to reject dependent Claims 11-13. Accordingly, Appellant concludes that the subject matter contained in Claims 11-13 is deemed allowable over the art.

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must a reasonable expectation of success. Finally, the prior references, when combined, must teach or suggest all of the claim limitations. MPEP § 2142.

The Federal Circuit has recently stressed that "[o]ur case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is vigorous application of requirement for a showing of the teaching or motivation to combine [or modify the] prior art". In re Dembiczak, 50 U.S.P.Q. 2d 1614, 1617 (Fed. Cir. 1999) (emphasis added). The Federal Circuit requires that the "showing ... be clear and particular." Id.

The is precisely the case in the present matter. The Examiner has failed to point to specific information in either reference which would suggest the combination between the two references. The Examiner points to no factual basis for combining the two references. The Examiner only makes the broad conclusory statements that it would have been obvious "to incorporate such a cavity shape, as taught by *Thorton*, into *Rabe*", but provides absolutely no factual basis for this combination. As such, the Examiner fails to make any "particular findings regarding the locus of the suggestion, teaching, or motivation to combine the prior art references", as specifically required by the Federal Circuit. Id.

Moreover, the Examiner has failed to point to specific information in *Rabe* or *Thorton*, or in the knowledge generally available to one of ordinary skill in the art, which would teach the combination of *Rabe* and *Thorton* in the manner suggested by the

Examiner. While the Examiner points to the statement in *Rabe* that the acoustic horn may be "other shapes and types", this alone does not provide the teaching to shape the horn of *Rabe* into a right triangle-shaped cavity, as suggested by the Examiner. Nor does the Examiner provide any justification or benefit provided by shaping the horn of *Rabe* into a right triangle-shaped cavity.

More importantly, combination of *Rabe* and *Thorton* does not disclose or teach the features of the present invention. In particular, the modified acoustic horn of *Rabe* into a right triangle-shaped cavity as taught by *Thorton* does not expressly teach (1) an acoustic pipe and (2) that the acoustic pipe entirely extends along the perimeter of the flip. The Examiner completely ignores the fact that the acoustic horns of *Rabe* and *Thorton* are formed as flared cavities, which is entirely different than an acoustic pipe. Moreover, it is this differing geometry which prevents the acoustic horns from being *entirely disposed along the peripheral edge* of the flip. Nor does *Rabe* nor *Thorton* acknowledge the benefits of such a placement, such as maintaining a thin profile.

The Examiner points to no specific information in *Rabe* and *Thorton* that would suggest the placement of an acoustic pipe extending entirely along a peripheral edge of a flip phone, as specifically recited in Claims 1 and 10. In fact, the Examiner's only support to modify *Rabe* in the manner suggested by the Examiner appears to be the instant disclosure. It is well established that the use of the application under examination as a guide for modifying the cited art constitutes impermissible hindsight, which may not be used in rejection the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q. 1566 (Fed. Cir. 1990).

Finally, the Examiner unilaterally discredits the problem solved by the present invention. Instead, the Examiner attempts to legislate a new requirement for patentability. The patent statute provides for "useful" inventions. 35 U.S.C. § 101. The patent statute does not require that invention to have a functional advantage. While the cellular phone of the present invention may not have a functional advantage over *Rabe* or *Thorton*, the Examiner cannot seriously dispute the usefulness of having a phone that is thinner in profile and easier to transport.

**VII. CONCLUSION**

For at least the reasons set forth above, it is respectfully submitted that the rejection of Claims 1-10 is improper and should be reversed.

Respectfully submitted,

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By:



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Date: November 16, 2000

## APPENDIX A

### The Appealed Claims

1. A flip style cellular telephone, comprising:  
a main housing;  
a flip, pivotally mounted to the main housing by a hinge, the flip having a free end remote from the hinge; and  
an acoustic pipe entirely extending on a peripheral edge of the flip from the free end to the hinged end to carry sound from the free end to the hinged end of the flip.
2. The flip style cellular telephone as claimed in claim 1, further comprising a microphone mounted in the main housing and in acoustic communication with the acoustic pipe.
3. The flip style cellular telephone as claimed in claim 2, wherein the hinge is hollow and the acoustic pipe connects to the microphone through the hinge.
4. The flip style cellular telephone as claimed in claim 1, wherein the acoustic pipe provides a single acoustic pathway from the free end to the hinged end of the flip.
5. The flip style cellular telephone as claimed in claim 1, wherein the acoustic pipe extends along the entire surrounding peripheral edge of the flip.
6. The flip style cellular telephone as claimed in claim 5, further comprising a microphone mounted in the main housing to receive sound from the acoustic pipe.
7. The flip style cellular telephone as claimed in claim 6, wherein the microphone is located nearer one end of the hinge, so that two acoustic paths of differing length to transmit sound to the microphone are provided.

8. The flip style cellular telephone as claimed in claim 1, wherein the acoustic pipe has a sound entry opening at the free end of the flip.

9. The flip style cellular telephone as claimed in claim 1, wherein the acoustic pipe is a hollow channel formed in the peripheral edge of the flip.

10. A flip style cellular telephone, comprising:  
a main housing;  
microphone mounted in the main housing;  
a flip, pivotally mounted to the main housing by a hinge, the flip having a free end remote from the hinge; and  
an acoustic pipe entirely extending on a peripheral edge of the flip from the free end to the hinged end, the acoustic pipe having a sound inlet at the free end of the flip and being in acoustic communication with the microphone, wherein sound is transmittable by the acoustic pipe from the inlet to the microphone.



Patent

Attorney's Docket No. 027575-039

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2744

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of )

Gregory S. MENDOLIA )

Application No.: 08/880,648 )

Filed: June 23, 1997 )

For: ACOUSTIC PIPE FOR FLIP STYLE )  
CELLULAR TELEPHONES )

Group Art Unit: 2744

Examiner: C. Craver

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**TRANSMITTAL LETTER FOR APPELLANT'S SUPPLEMENTAL  
BRIEF ON APPEAL AND REQUEST FOR REINSTATEMENT  
OF APPEAL**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Further to the Appeal Brief filed on June 2, 2000, and in response to the Official Action dated August 16, 2000, in connection with the above-identified application, submitted in triplicate with this Transmittal Letter is Appellant's Supplemental Brief on Appeal. The \$300.00 fee required by 37 C.F.R. § 1.192(a) and 37 C.F.R. § 1.17(c) was paid on June 2, 2000.

Also it is respectfully requested that the appeal be reinstated.

The Commissioner is authorized to charge any fees that may be required by this submission, such as the fee specified in 37 C.F.R. § 1.17(c), and to credit any overpayment to Deposit Account No. 02-4800.

Respectfully submitted,

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